



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,605	03/29/2004	Qi He hong	01263.020284.	9702

5514 7590 12/14/2005

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

NGUYEN, HAU H

ART UNIT	PAPER NUMBER
----------	--------------

2676

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,605

Applicant(s)

HONG ET AL.

Examiner

Hau H. Nguyen

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/10/05 - 5/25/05 - 3/27/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Bright (U.S. Patent No. 6,897,977).

Referring to claims 1, 16-18, 21, and 34-39, Bright teaches a recursive division and comparison scheme, wherein areas of a grid corresponding to the image data are divided into increasingly smaller triangles based on the level of detail contained within each triangle. For instance, areas with a lot of detail will comprise many small triangles, while areas with less detail will have larger triangles. Data is then stored defining each of the triangles and actual and/or predicted component values corresponding to pixels within each triangle (col. 2, lines 63-67, and col. 3, lines 1-6). As shown in Fig. 1 in combination with Fig. 2, Bright teaches supposing that triangle 42 (*a starting polygon*) contains a moderate level of detail towards its top left-hand corner, resulting in the threshold value being exceeded (*determining a respective measure of importance of the texture data*). As a result, in block 36 triangle 42 is divided by a line 46 extending from a point 6 of the hypotenuse of triangle 42 to point 5, which corresponds with the right angle corner of triangle 42, thereby creating a new pair of triangles 48 and 50 (*defining a respective second polygon in the first polygon area, such that each second polygon is defined*

Art Unit: 2676

with an area dependent upon the measure of importance of texture data, wherein the area of the second polygon is less than that of the first polygon) (col. 6, lines 37-54). *Generation of texture data for the second polygons in dependence upon the texture data for the first polygons* is shown at steps 35 and 36 of Fig. 1A, and described on column 6, lines 9-11.

As per claims 2-3, and 22-23, as cited above, Bright teaches the measure of importance of texture data is dependent upon the *content (details) of texture data*, and the determination of the measure of importance of texture data is based upon the amount of detail in texture data (*measure of uniformity of texture data*).

In regard to claims 4-5, 8, 24-25, and 28, as shown in Figs. 1A and 1B, Bright teaches the measure of important of texture data is determined in dependent upon color components of texture data (Fig. 1B) (and thus, dependent upon the number of colors in texture data, i.e. R, G, B components), or upon the greyscale values of the texture data (Fig. 1A, block 24).

As per claims 6 and 26, Bright teaches calculating a measure of differences in values of the texture data (i.e. comparing the texture data with a threshold value as shown at step 34 and column 5, lines 49-54).

In regard to claims 7 and 27, as shown in Fig. 1A, Bright teaches the texture data is filtered (through interpolation, at step 32) and the measure of extent of differences in the filtered texture data is calculated at step 34).

In regard to claims 9 and 29, Bright teaches for each triangle, a set of predicted component values are determined, based on actual component values at the vertices of the triangle or actual component values on or proximate to the edges of the triangle (col. 3, lines 15-21) (*measure of importance data is dependent upon edges in the texture data*).

As per claims 10 and 30, Bright teaches the method additionally enables a user to define one or more areas within an image that are to be compressed such that the detail in these areas is preserved at a higher level than other areas in the image that are not selected (col. 10, lines 53-65) (*user input signals conveying importance for each of at least some of the first polygons*).

As for claims 11 and 31, as cited above, Bright teaches the connectivity of the defined second polygons is different from the connectivity of the first polygons.

As for claims 12-13, and 32-33, as cited above, Bright teaches the first and second polygons comprising groups of triangles.

As for claims 14, 19, and 41, it is inherent at step 35 of Fig. 1A that a signal carrying data should be generated for defining the generated texture map.

In regard to claims 15 and 20, with reference to Fig. 1A, Bright teaches texture map data is recorded to the triangle (block 36).

As per claim 40, Bright teaches a storage medium storing computer programs instructions for programming a programmable processing apparatus operable to perform the discussed method on column 3, lines 59-67.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

Kawasaki (U.S. Patent No. 6,246,414) teaches an image processing apparatus including a polygon dividing section for selectively dividing each of a set of polygons approximately representing a three-dimensional object based on a geometric data of the polygon and a reference data to convert the set of polygons into a new set of polygons.

Art Unit: 2676

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 571-272-7787. The examiner can normally be reached on MON-FRI from 8:30-5:30.

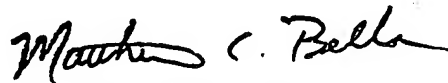
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778.

The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

H. Nguyen

12/08/2005


MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600